SEQUENCE LISTING

<110> Japan Science and Technology Agency

<120> A transcriptional factor inducing apoptosis of cancer cells

<130> FS04-408PCT

<160> 11

<170> PatentIn version 3.3

<210> 1
<211> 393
<212> PRT
<213> Homo sapiens

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35 40 45

Asp Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro Asp Glu Ala Pro
50 55 60

Arg Met Pro Glu Ala Ala Pro Arg Val Ala Pro Ala Pro Ala Ala Pro
65 70 75 80

Thr Pro Ala Ala Pro Ala Pro Ala Pro Ser Trp Pro Leu Ser Ser Ser
85 90 95

Val Pro Ser Gln Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu Gly
100 105 110

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Phe Leu His Ser Gly Thr Ala Lys Ser Val Thr Cys Thr Tyr Ser Pro
        115                 120                 125

Ala Leu Asn Lys Met Phe Cys Gln Leu Ala Lys Thr Cys Pro Val Gln
    130                 135                 140

Leu Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val Arg Ala Met
145                 150                 155                 160

Ala Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val Val Arg Arg Cys
                165                 170                 175

Pro His His Glu Arg Cys Ser Asp Ser Asp Gly Leu Ala Pro Pro Gln
            180                 185                 190

His Leu Ile Arg Val Glu Gly Asn Leu Arg Val Glu Tyr Leu Asp Asp
        195                 200                 205

Arg Asn Thr Phe Arg His Ser Val Val Val Pro Tyr Glu Pro Pro Glu
    210                 215                 220

Val Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr Met Cys Asn Ser
225                 230                 235                 240

Ser Cys Met Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr
                245                 250                 255

Leu Glu Asp Ser Ser Gly Asn Leu Leu Gly Arg Asn Ser Phe Glu Val
            260                 265                 270

His Val Cys Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn
        275                 280                 285

Leu Arg Lys Lys Gly Glu Pro His His Glu Leu Pro Pro Gly Ser Thr
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290 295 300

Lys Arg Ala Leu Pro Asn Asn Thr Ser Ser Ser Pro Gln Pro Lys Lys
305 310 315 320

Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu
325 330 335

Arg Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp
340 345 350

Ala Gln Ala Gly Lys Glu Pro Gly Gly Ser Arg Ala His Ser Ser His
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Leu Lys Ser Lys Lys Gly Gln Ser Thr Ser Arg His Lys Lys Leu Met
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Phe Lys Thr Glu Gly Pro Asp Ser Asp
385 390

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<213> Homo sapiens

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Glu Ser Asp Lys Phe Ile Cys Ile Arg Glu Lys Val Gly Glu Gln Ala
35 40 45

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Gln Val Val Ile Ile Asp Met Asn Asp Pro Ser Asn Pro Ile Arg Arg
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Pro Ile Ser Ala Asp Ser Ala Ile Met Asn Pro Ala Ser Lys Val Ile
65                  70                  75                  80

Ala Leu Lys Ala Gly Lys Thr Leu Gln Ile Phe Asn Ile Glu Met Lys
                85                  90                  95

Ser Lys Met Lys Ala His Thr Met Thr Asp Asp Val Thr Phe Trp Lys
            100                 105                 110

Trp Ile Ser Leu Asn Thr Val Ala Leu Val Thr Asp Asn Ala Val Tyr
        115                 120                 125

His Trp Ser Met Glu Gly Glu Ser Gln Pro Val Lys Met Phe Asp Arg
    130                 135                 140

His Ser Ser Leu Ala Gly Cys Gln Ile Ile Asn Tyr Arg Thr Asp Ala
145                 150                 155                 160

Lys Gln Lys Trp Leu Leu Leu Thr Gly Ile Ser Ala Gln Gln Asn Arg
                165                 170                 175

Val Val Gly Ala Met Gln Leu Tyr Ser Val Asp Arg Lys Val Ser Gln
            180                 185                 190

Pro Ile Glu Gly His Ala Ala Ser Phe Ala Gln Phe Lys Met Glu Gly
        195                 200                 205

Asn Ala Glu Glu Ser Thr Leu Phe Cys Phe Ala Val Arg Gly Gln Ala
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Gly Gly Lys Leu His Ile Ile Glu Val Gly Thr Pro Pro Thr Gly Asn
225                 230                 235                 240
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```
Gln Pro Phe Pro Lys Lys Ala Val Asp Val Phe Phe Pro Pro Glu Ala
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Gln Asn Asp Phe Pro Val Ala Met Gln Ile Ser Glu Lys His Asp Val
            260                 265                 270

Val Phe Leu Ile Thr Lys Tyr Gly Tyr Ile His Leu Tyr Asp Leu Glu
        275                 280                 285

Thr Gly Thr Cys Ile Tyr Met Asn Arg Ile Ser Gly Glu Thr Ile Phe
    290                 295                 300

Val Thr Ala Pro His Glu Ala Thr Ala Gly Ile Ile Gly Val Asn Arg
305                 310                 315                 320

Lys Gly Gln Val Leu Ser Val Cys Val Glu Glu Glu Asn Ile Ile Pro
                325                 330                 335

Tyr Ile Thr Asn Val Leu Gln Asn Pro Asp Leu Ala Leu Arg Met Ala
            340                 345                 350

Val Arg Asn Asn Leu Ala Gly Ala Glu Glu Leu Phe Ala Arg Lys Phe
        355                 360                 365

Asn Ala Leu Phe Ala Gln Gly Asn Tyr Ser Glu Ala Ala Lys Val Ala
    370                 375                 380

Ala Asn Ala Pro Lys Gly Ile Leu Arg Thr Pro Asp Thr Ile Arg Arg
385                 390                 395                 400

Phe Gln Ser Val Pro Ala Gln Pro Gly Gln Thr Ser Pro Leu Leu Gln
                405                 410                 415
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Tyr Phe Gly Ile Leu Leu Asp Gln Gly Gln Leu Asn Lys Tyr Glu Ser
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Leu Glu Leu Cys Arg Pro Val Leu Gln Gln Gly Arg Lys Gln Leu Leu
        435                 440                 445

Glu Lys Trp Leu Lys Glu Asp Lys Leu Glu Cys Ser Glu Glu Leu Gly
    450                 455                 460

Asp Leu Val Lys Ser Val Asp Pro Thr Leu Ala Leu Ser Val Tyr Leu
465                 470                 475                 480

Arg Ala Asn Val Pro Asn Lys Val Ile Gln Cys Phe Ala Glu Thr Gly
                485                 490                 495

Gln Val Gln Lys Ile Val Leu Tyr Ala Lys Lys Val Gly Tyr Thr Pro
            500                 505                 510

Asp Trp Ile Phe Leu Leu Arg Asn Val Met Arg Ile Ser Pro Asp Gln
        515                 520                 525

Gly Gln Gln Phe Ala Gln Met Leu Val Gln Asp Glu Glu Pro Leu Ala
    530                 535                 540

Asp Ile Thr Gln Ile Val Asp Val Phe Met Glu Tyr Asn Leu Ile Gln
545                 550                 555                 560

Gln Cys Thr Ala Phe Leu Leu Asp Ala Leu Lys Asn Asn Arg Pro Ser
                565                 570                 575

Glu Gly Pro Leu Gln Thr Arg Leu Leu Glu Met Asn Leu Met His Ala
            580                 585                 590

Pro Gln Val Ala Asp Ala Ile Leu Gly Asn Gln Met Phe Thr His Tyr
        595                 600                 605
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Asp Arg Ala His Ile Ala Gln Leu Cys Glu Lys Ala Gly Leu Leu Gln
    610                 615                 620

Arg Ala Leu Glu His Phe Thr Asp Leu Tyr Asp Ile Lys Arg Ala Val
625                 630                 635                 640

Val His Thr His Leu Leu Asn Pro Glu Trp Leu Val Asn Tyr Phe Gly
                645                 650                 655

Ser Leu Ser Val Glu Asp Ser Leu Glu Cys Leu Arg Ala Met Leu Ser
            660                 665                 670

Ala Asn Ile Arg Gln Asn Leu Gln Ile Cys Val Gln Val Ala Ser Lys
        675                 680                 685

Tyr His Glu Gln Leu Ser Thr Gln Ser Leu Ile Glu Leu Phe Glu Ser
    690                 695                 700

Phe Lys Ser Phe Glu Gly Leu Phe Tyr Phe Leu Gly Ser Ile Val Asn
705                 710                 715                 720

Phe Ser Gln Asp Pro Asp Val His Phe Lys Tyr Ile Gln Ala Ala Cys
                725                 730                 735

Lys Thr Gly Gln Ile Lys Glu Val Glu Arg Ile Cys Arg Glu Ser Asn
            740                 745                 750

Cys Tyr Asp Pro Glu Arg Val Lys Asn Phe Leu Lys Glu Ala Lys Leu
        755                 760                 765

Thr Asp Gln Leu Pro Leu Ile Ile Val Cys Asp Arg Phe Asp Phe Val
    770                 775                 780
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His Asp Leu Val Leu Tyr Leu Tyr Arg Asn Asn Leu Gln Lys Tyr Ile
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Glu Ile Tyr Val Gln Lys Val Asn Pro Ser Arg Leu Pro Val Val Ile
                805                 810                 815

Gly Gly Leu Leu Asp Val Asp Cys Ser Glu Asp Val Ile Lys Asn Leu
            820                 825                 830

Ile Leu Val Val Arg Gly Gln Phe Ser Thr Asp Glu Leu Val Ala Glu
        835                 840                 845

Val Glu Lys Arg Asn Arg Leu Lys Leu Leu Leu Pro Trp Leu Glu Ala
    850                 855                 860

Arg Ile His Glu Gly Cys Glu Glu Pro Ala Thr His Asn Ala Leu Ala
865                 870                 875                 880

Lys Ile Tyr Ile Asp Ser Asn Asn Asn Pro Glu Arg Phe Leu Arg Glu
                885                 890                 895

Asn Pro Tyr Tyr Asp Ser Arg Val Val Gly Lys Tyr Cys Glu Lys Arg
            900                 905                 910

Asp Pro His Leu Ala Cys Val Ala Tyr Glu Arg Gly Gln Cys Asp Leu
        915                 920                 925

Glu Leu Ile Asn Val Cys Asn Glu Asn Ser Leu Phe Lys Ser Leu Ser
    930                 935                 940

Arg Tyr Leu Val Arg Arg Lys Asp Pro Glu Leu Trp Gly Ser Val Leu
945                 950                 955                 960

Leu Glu Ser Asn Pro Tyr Arg Arg Pro Leu Ile Asp Gln Val Val Gln
                965                 970                 975
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Thr Ala Leu Ser Glu Thr Gln Asp Pro Glu Glu Val Ser Val Thr Val
           980                 985                 990

Lys Ala Phe Met Thr Ala Asp Leu  Pro Asn Glu Leu Ile  Glu Leu Leu
       995                 1000                1005

Glu Lys  Ile Val Leu Asp Asn  Ser Val Phe Ser Glu  His Arg Asn
    1010                1015                1020

Leu Gln  Asn Leu Leu Ile Leu  Thr Ala Ile Lys Ala  Asp Arg Thr
    1025                1030                1035

Arg Val  Met Glu Tyr Ile Asn  Arg Leu Asp Asn Tyr  Asp Ala Pro
    1040                1045                1050

Asp Ile  Ala Asn Ile Ala Ile  Ser Asn Glu Leu Phe  Glu Glu Ala
    1055                1060                1065

Phe Ala  Ile Phe Arg Lys Phe  Asp Val Asn Thr Ser  Ala Val Gln
    1070                1075                1080

Val Leu  Ile Glu His Ile Gly  Asn Leu Asp Arg Ala  Tyr Glu Phe
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Ala Glu  Arg Cys Asn Glu Pro  Ala Val Trp Ser Gln  Leu Ala Lys
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Ala Gln  Leu Gln Lys Gly Met  Val Lys Glu Ala Ile  Asp Ser Tyr
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Ile Lys  Ala Asp Asp Pro Ser  Ser Tyr Met Glu Val  Val Gln Ala
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Ala Asn  Thr Ser Gly Asn Trp  Glu Glu Leu Val Lys  Tyr Leu Gln
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Met Ala  Arg Lys Lys Ala Arg  Glu Ser Tyr Val Glu  Thr Glu Leu
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Ile Phe  Ala Leu Ala Lys Thr  Asn Arg Leu Ala Glu  Leu Glu Glu
    1175                1180                1185

Phe Ile  Asn Gly Pro Asn Asn  Ala His Ile Gln Gln  Val Gly Asp
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Arg Cys  Tyr Asp Glu Lys Met  Tyr Asp Ala Ala Lys  Leu Leu Tyr
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Asn Asn  Val Ser Asn Phe Gly  Arg Leu Ala Ser Thr  Leu Val His
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Leu Gly  Glu Tyr Gln Ala Ala  Val Asp Gly Ala Arg  Lys Ala Asn
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Ser Thr  Arg Thr Trp Lys Glu  Val Cys Phe Ala Cys  Val Asp Gly
    1250                1255                1260

Lys Glu  Phe Arg Leu Ala Gln  Met Cys Gly Leu His  Ile Val Val
    1265                1270                1275

His Ala  Asp Glu Leu Glu Glu  Leu Ile Asn Tyr Tyr  Gln Asp Arg
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Gly Tyr  Phe Glu Glu Leu Ile  Thr Met Leu Glu Ala  Ala Leu Gly
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Leu Glu  Arg Ala His Met Gly  Met Phe Thr Glu Leu  Ala Ile Leu
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Tyr Ser Lys Phe Lys Pro Gln Lys Met Arg Glu His Leu Glu Leu
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Gln Ala His Leu Trp Ala Glu Leu Val Phe Leu Tyr Asp Lys Tyr
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Glu Glu Tyr Asp Asn Ala Ile Ile Thr Met Met Asn His Pro Thr
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Asp Ala Trp Lys Glu Gly Gln Phe Lys Asp Ile Ile Thr Lys Val
1385 1390 1395

Ala Asn Val Glu Leu Tyr Tyr Arg Ala Ile Gln Phe Tyr Leu Glu
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Gln Leu Pro Leu Val Lys Pro Tyr Leu Arg Ser Val Gln Asn His
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Asn Asn Lys Ser Val Asn Glu Ser Leu Asn Asn Leu Phe Ile Thr
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Glu Glu Asp Tyr Gln Ala Leu Arg Thr Ser Ile Asp Ala Tyr Asp
1475 1480 1485

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Asn Phe  Asp Asn Ile Ser Leu  Ala Gln Arg Leu Glu  Lys His Glu
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Asn Arg  Trp Lys Gln Ser Val  Glu Leu Cys Lys Lys  Asp Ser Leu
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Tyr Lys  Asp Ala Met Gln Tyr  Ala Ser Glu Ser Lys  Asp Thr Glu
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Leu Ala  Glu Glu Leu Leu Gln  Trp Phe Leu Gln Glu  Glu Lys Arg
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Glu Cys  Phe Gly Ala Cys Leu  Phe Thr Cys Tyr Asp  Leu Leu Arg
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Pro Asp  Val Val Leu Glu Thr  Ala Trp Arg His Asn  Ile Met Asp
    1580                 1585                 1590

Phe Ala  Met Pro Tyr Phe Ile  Gln Val Met Lys Glu  Tyr Leu Thr
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Lys Val  Asp Lys Leu Asp Ala  Ser Glu Ser Leu Arg  Lys Glu Glu
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Glu Gln  Ala Thr Glu Thr Gln  Pro Ile Val Tyr Gly  Gln Pro Gln
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Leu Met  Leu Thr Ala Gly Pro  Ser Val Ala Val Pro  Pro Gln Ala
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Pro Phe  Gly Tyr Gly Tyr Thr  Ala Pro Pro Tyr Gly  Gln Pro Gln
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Pro Gly Phe Gly Tyr Ser Met
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Pro Lys

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Ile Val Leu Asp Asn Ser Val Phe Ser Glu His Arg
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